

## **IN THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

5    --1. - 29.       **(Canceled)**

30.   **(Currently Amended)**       A system for interfacing a plurality of remote devices with input/output devices at a plurality of user locations, said system comprising:

a switch selectively operable to ~~connect remote devices with input/output devices~~

10               ~~located at one or more user locations such that users at said user locations~~

~~can interact with said remote devices, to connect a helper circuit with one~~

or more of said input/output devices[[,]] to establish bi-directional

communication between said input/output devices and said one or more

remote devices through said switch, and to associate said helper circuit

15               with said input/output devices ~~at any one of said user locations~~ such that

said selected input/output device is connected to said helper circuit

through said switch; and

a control circuit coupled to said switch for controlling said switch, said control

circuit ~~operable to run an interactive program~~ for selecting one or more of

20               said remote devices, and to instruct said switch to connect said

input/output devices that transmit helper codes to said helper circuit such

that users at said user locations can selectively interact with said helper

circuit to select said remote devices; and

a code recognition circuit coupled to said helper circuit for receiving input signals from each of said input/output devices, said code recognition circuit for detecting one or more predetermined helper codes in said input signals and for transmitting said helper codes to said control circuit.

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31. **(Previously Presented)** A system according to claim 30, wherein said interactive program includes accessing a database associating one or more users with access rights to said remote devices and controlling access to said remote devices according to said access rights set forth in said database.

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32. **(Previously Presented)** A system according to claim 31, wherein said interactive program includes displaying representations of each available said remote devices on a display device connected to said helper circuit such that display of said representations is different for different ones of said users.

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33. **(Previously Presented)** A system according to claim 30, wherein said control circuit is separate from said remote devices.

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34. **(Previously Presented)** A system according to claim 33, wherein said control circuit includes a switch control circuit separate from said helper circuit, said switch control circuit being connected to said switch so that said switch control circuit can actuate said switch, said helper circuit being connected to said switch control circuit for transmitting commands to said switch control computer.

35. **(Currently Amended)** A system according to claim 34, wherein said code recognition circuit is operative to recognize one or more action codes included in data input from said input/output devices and to transmit said action codes to said switch control circuit.

36. **(Currently Amended)** A system according to claim 35, wherein said interactive program defines a running set of said remote devices associated with each set of said input/output devices, and wherein said action codes include change server codes indicative of connecting one of said input/output devices to another of said remote devices.

37. **(Currently Amended)** An apparatus for connecting a plurality of input devices at one or more user locations to one or more remote devices, said apparatus comprising:

a plurality of user interface circuits for receiving input signals from any one of a plurality of input devices, ~~each said user interface circuit being coupled to at least one of said input devices at a user location remote from each said user interface circuit;~~

a plurality of remote device interface circuits coupled to at least one of said remote devices, said remote device interface circuits for transmitting signals to one or more remote devices, ~~each said remote device interface circuit coupled to at least one of said remote devices at a remote location;~~

a switching circuit for selectively associating said user interface circuits and said remote device interface circuits such that said input signals are ~~will be~~ transmitted to said remote device ~~coupled to said associated remote device interface circuit;~~ and

a code recognition circuit associated with said user interface circuits, said code recognition circuit ~~operative to detect~~ for detecting one or more command codes in said input signals and ~~to provide~~ for providing a code output signal including first data representing at least one of said command codes and second data representing identification of said user interface circuit where said command code was detected.

38. **(Previously Presented)** A system according to claim 37, wherein at least one of said code recognition circuits includes a plurality of user interface processors, each said user interface processor being connected to one or more of said user interface circuits, the system further including at least one control processor and a control data channel connecting a set of said user interface processors with each said control processor, each said control processor accepting data representing said command codes and assigning address data based at least in part upon identity of said user interface processor which sent said data.

39. **(Previously Presented)** A system according to claim 38, wherein each said user interface processor is associated with only one said user interface circuit.

40. **(Previously Presented)** A system according to claim 38, wherein said at least one control processor includes a plurality of said control processors each associated with a different set of user interface processors, each said control processor being operative to assign said address data based in part upon identity of said control processor and in part upon identity of said user interface processor within a set of said user interface processors associated with said control processor.

41. **(Previously Presented)** A system according to claim 38, wherein each said user interface processor is operative to delete said command codes from input data signals supplied to said user interface processor, and to pass said input data signals without said command codes into a user data channel, said switch being operative to connect a user data channel of said user interface processors with said remote devices.

42. **(Previously Presented)** A system according to claim 41, wherein said remote devices and said user interface circuits include video connections, said switch being operative to connect said video connection of each said remote device to a video connection of said user interface circuit associated with said remote device.

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43. **(Currently Amended)** A method of interfacing a plurality of remote devices with one or more input/output devices at a plurality of user locations, said method comprising the steps of:

receiving input signals from one or more input devices located at one or more user

5 locations;

conveying said input signals to a code recognition circuit;

detecting one or more predetermined ~~helper~~ codes in said input signals, said

~~helper~~ codes being transmitted to a control circuit;

operating said control circuit to actuate a switch in response to said ~~helper~~ codes

10 to connect said input/output device that supplied said ~~helper~~ codes with a remote device helper control circuit;

running an interactive program in said helper control circuit for selecting one or more remote devices, said helper control circuit interacting with a user at said input/output device that supplied said ~~helper~~ codes; and

15 actuating said switch to connect or disconnect one or more of said remote devices selected during operation of said interactive program with said input/output device.

44. **(Currently Amended)** A method according to claim 43, wherein said detecting is performed at one or more central locations remote from said user locations,  
20 said ~~helper~~ codes and said input signals being transmitted on a common channel from said user locations to said one or more central locations.

45. **(Currently Amended)** A method according to claim 43, said method further comprising the steps of:

detecting action codes distinct from said ~~helper~~ codes in said input signals; and

actuating said switch to connect or disconnect connections between said

5 remote devices and said input/~~output~~ devices in response to said action codes without use of said interactive program.

46. **(Currently Amended)** A method according to claim 45, wherein said steps of actuating said switch are performed by a switching circuit separate from said ~~helper~~

10 control circuit.

47. **(Currently Amended)** A method according to claim 45, said method further comprising the step of maintaining data defining a running set of said remote devices for each said user location, said actuating said switch without use of said

15 interactive program further including switching between said remote devices of said running set for said input/~~output~~ device that supplied said action codes.

48. **(Currently Amended)** A method according to claim 45, wherein a set of said input/~~output~~ devices at a particular one of said user locations includes multiple

20 display devices.



49. **(Previously Presented)** A method according to claim 48, said method further comprising the step of:

maintaining data defining a running set of said remote devices for each said user location, said actuating said switch without use of said interactive program  
5 further including switching between said remote devices of said running set for said particular one of said user locations to different ones of said multiple display devices in response to said action codes. --